

# Dhofar 1428

Anorthositic fragmental breccia

213 g

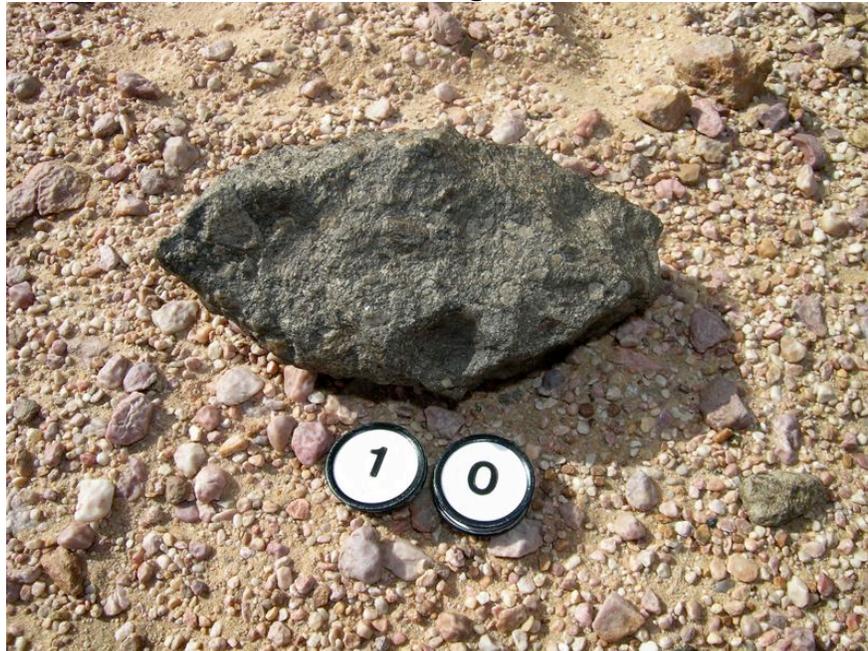


Figure 1: Photo of Dhofar 1428 with ~ 1 inch disks for scale (photo from R. Korotev and M. Farmer).

## Introduction

Dhofar 1428 (Fig. 1) was found in the Dhofar region of Oman (Fig. 2) in March, 2006 (Connolly et al., 2006). The 213 g brownish gray stone lacks fusion crust, and has feldspathic clasts in a fine grained dark matrix (Fig. 3).

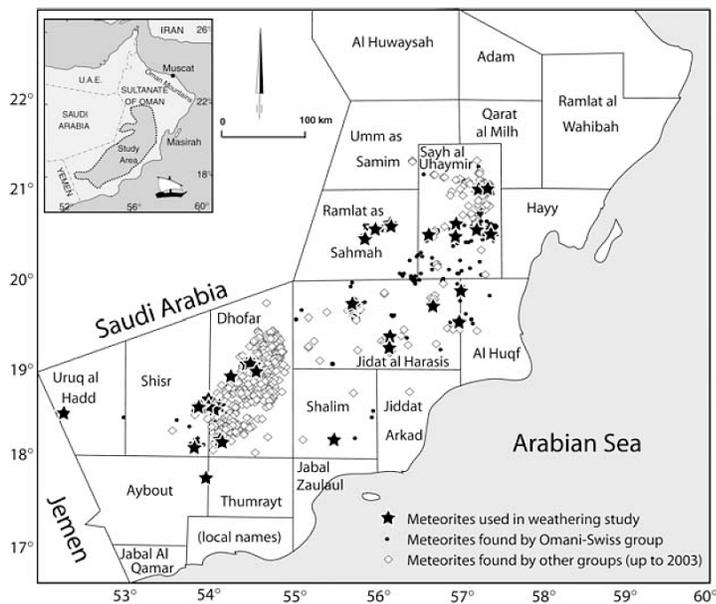


Figure 2: Map showing location of regions within Oman where meteorites have been recovered, such as Dhofar 1428.

### **Petrography, mineralogy, and chemistry**

Dhofar 1428 is mainly an anorthositic breccia consisting of many mineral fragments and lithic clasts in a fine grained matrix. Plagioclase feldspar has a narrow compositional range between  $An_{93}$  and  $An_{98}$ , and olivine between  $Fa_{25}$  and  $Fa_{36}$  (Connolly et al., 2006; Bunch and Wittke, 2006). In addition to the anorthosite clasts, there are norites, anorthositic gabbros, troctolites, and ophitic to subophitic basalts. The groundmass consists of plagioclase, pyroxene, opaques, glass, and a vesicular glassy melt.



*Figure 3: Photo of a slab of Dhofar 1428, illustrating the variety of feldspathic clasts in a dark grey interior (photo by M. Farmer).*

### **Radiogenic age dating**

None yet reported.

### **Cosmogenic isotopes and exposure ages**

None yet reported.